



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

| APPLICATION NO.   | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO.   | CONFIRMATION NO. |
|---|-------------|----------------------|-----------------------|------------------|
| 09/851,235  | 05/08/2001  | Harvey R. Bialk      | 2001-0192             | 3999             |
| 7590  | 12/04/2003  |                      | EXAMINER              |                  |
| Samuel H. Dworetsky<br>AT&T CORP.<br>P.O. Box 4110<br>Middletown, NJ 07748-4110 |             |                      | SALTARELLI, DOMINIC D |                  |
|   |             |                      | ART UNIT              | PAPER NUMBER     |
|   |             |                      | 2611                  | 4                |
| DATE MAILED: 12/04/2003   |             |                      |                       |                  |

Please find below and/or attached an Office communication concerning this application or proceeding.

|                              |                        |                     |  |
|------------------------------|------------------------|---------------------|--|
| <b>Office Action Summary</b> | <b>Application No.</b> | <b>Applicant(s)</b> |  |
|                              | 09/851,235             | BIALK ET AL.        |  |
|                              | <b>Examiner</b>        | <b>Art Unit</b>     |  |
|                              | Dominic D Saltarelli   | 2611                |  |

— The MAILING DATE of this communication appears on the cover sheet with the correspondence address —

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

1) Responsive to communication(s) filed on 08 May 2001.

2a) This action is FINAL.                    2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

4) Claim(s) 1-17 is/are pending in the application.

4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

5) Claim(s) \_\_\_\_\_ is/are allowed.

6) Claim(s) 1-17 is/are rejected.

7) Claim(s) \_\_\_\_\_ is/are objected to.

8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on 08 May 2001 is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. §§ 119 and 120

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

13) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.  
a) The translation of the foreign language provisional application has been received.

14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

#### Attachment(s)

1) Notice of References Cited (PTO-892)

2) Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_.                    4) Interview Summary (PTO-413) Paper No(s) \_\_\_\_\_.  
 5) Notice of Informal Patent Application (PTO-152)

6) Other: \_\_\_\_\_

DETAILED ACTION

***Specification.***

1. The disclosure is objected to because of the following informalities: Serial numbers of co-pending applications should be listed.

Appropriate correction is required.

***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 10, 12, and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Farry et al. (5,608,447) [Farry] in view of Safadi (5,572,517).

Regarding claims 1 and 13, Farry discloses a hybrid fiber coax (HFC) network (col. 3, lines 5-9) and corresponding method for provisioning network resources, having network elements operable for communication telephony, data, and video signals (col. 2, lines 12-16 and col. 4, lines 13-31) with customer-premises equipment of a subscriber (DET 1500, Figure 15, col. 10 line 63 – col. 11 line 2), the HFC network comprising a database (Figure 5, 530) operable for storing data indicative of the configuration of the network elements and the customer-premises equipment (col. 7, lines 23-33) and an online provisioning application link (OPAL) (Level 1 gateway, col. 4, lines 43-51) operable with the

database (col. 11, lines 32-36) for provisioning network elements with the customer-premises equipment of the subscriber in order to enable communication of telephony, data, and video signals between the HFC network and the customer-premises equipment of the subscriber.

Farry fails to disclose the database stores data indicative of the assigned capacity of the network elements and the OPAL provisions network elements with customer-premises equipment based on the assigned capacity of the network elements.

Safadi discloses a database (22) which stores data indicative of the assigned capacity of network elements (col. 7, lines 36-38) and a link (24) which provisions network elements with customer-premises equipment (col. 7 line 56 – col. 8 line 9) based on the assigned capacity of the network elements (col. 7, lines 46-49 and col. 8, lines 5-9), making the system dynamic and configurable, without restrictions on the types of applications or services that are transmitted through the cable television network (col. 3, lines 63-67), relieving the network administrator from having to know the traffic pattern associated with the usage of such services (col. 4, lines 9-11), and simplifies the customer-premise equipment (col. 4, lines 13-16).

It would have been obvious at the time to a person of ordinary skill in the art to modify the HFC network and corresponding method for provisioning network element resources disclosed by Farry to store data indicative of the assigned capacity of network elements and to provision network elements with

customer-premises equipment through the OPAL based on said capacity as taught by Safadi. The reason for doing so would be to make the HFC network dynamic and configurable, without restrictions on the types of applications or services that are transmitted through the network, relieving the network administrator from having to know the traffic pattern associated with the usage of such services, and simplifies the customer-premise equipment, also taught by Safadi.

Regarding claim 10, the modified HFC network and corresponding method for provisioning network element resources disclosed by Farry and Safadi describes the invention of claim 1. Farry additionally discloses an order manager (information server 501) operable with the OPAL (col. 11, lines 21-28) for monitoring the provisioning of HFC network elements with customer-premises equipment by OPAL.

Regarding claim 12, the modified HFC network and corresponding method for provisioning network element resources disclosed by Farry and Safadi describes the invention of claim 1. Farry additionally discloses OPAL provisions the network elements with customer-premises equipment such that the network network elements with customer-premises equipment are logically connected (col. 7, lines 28-33).

4. Claims 2 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Farry and Safadi as applied to claims 1 and 13 above, and further in view of Ludwiczak et al (5,513,171) [Ludwiczak].

Regarding claims 2 and 14, the modified HFC network and corresponding method for provisioning network element resources disclosed by Farry and Safadi describes the inventions of claims 1 and 13, and additionally, Safadi discloses an Operation Support System (OSS, 28) element which responds to status and OAM&P (Operation Administration Maintenance and Provisioning) information supplied by the subnetwork element manager (ASEM, 22), disclosing the monitoring of status and configuration of the network elements.

What Farry and Safadi fail to disclose is an HFC network manager for monitoring the network elements and the customer-premises equipment, for controlling configuration of the network elements and the customer-premises equipment, and for monitoring the configuration of the network elements and the customer-premises equipment.

Ludwiczak discloses a Network Management System (NMS, Figure 1 150, col. 3, lines 45-60) which monitors the status and configuration of network elements and customer-premises equipment, and controls the configuration of the network elements and customer-premises equipment (co. 3, lines 9-21). The automatic monitoring and configuration control of network elements and related customer-premises equipment maintains a current and correct database of the configuration of a network (col. 3, lines 21-29).

It would have been obvious at the time to a person of ordinary skill in the art to modify the HFC network and corresponding method for provisioning network element resources disclosed by Farry and Safadi to include an HFC network manager for monitoring the network elements and the customer-premises equipment, for controlling configuration of the network elements and the customer-premises equipment, and for monitoring the configuration of the network elements and the customer-premises equipment, which would maintain a current and correct database of the configuration of a network, as taught by Ludwiczak.

5. Claims 3 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Farry, Safadi, and Ludwiczak as applied to claims 2 and 14 above, and further in view of Dev et al. (5,559,955) [Dev].

Regarding claim 3 and 15, the modified HFC network and corresponding method for provisioning network element resources disclosed by Farry, Safadi, and Ludwiczak describes the inventions of claims 2 and 14, but fails to disclose a fault manager having an alarm visualization tool operable with the HFC network manager and the database for generating visual displays of the status and configuration of the network elements and the customer-premises equipment of the subscriber based on the monitored status of the network elements and the customer-premises equipment and the data indicative of the configuration of the network elements and the customer-premises equipment.

Dev discloses a network management system which includes a fault manager [user interface (10)] that visually displays the status and configuration of every device in the network (col. 5, lines 21-25, 28-35, 41-44) and an alarm visualization tool (col. 8, lines 29-39) which is based on the monitored status and data indicative of the configuration of the network elements, so that a user is provided with different views of the network being managed (col. 3, lines 55-60) along with any alarms or events occurring within the network (col. 5, lines 14-16).

It would have been obvious at the time to a person of ordinary skill in the art to modify the HFC network and corresponding method for provisioning network element resources disclosed by Farry, Safadi, and Ludwiczak to include a fault manager having an alarm visualization tool operable with the HFC network manager and the database for generating visual displays of the status and configuration of the network elements and the customer-premises equipment (where customer-premises equipments can be considered a network element in light of the Dev disclosure) of the subscriber based on the monitored status of the network elements and the customer-premises equipment and the data indicative of the configuration of the network elements and the customer-premises equipment so that a user is provided with different views of the network being managed along with any alarms or events occurring within the network as taught by Dev.

6. Claims 4, 5, 6, 7, 16, and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Farry, Safadi, Ludwiczak, and Dev as applied to claims 3 and 15 above, and further in view of Daniel, III et al. (4,972,453) [Daniel].

Regarding claims 4, 6, 16, and 17, the modified HFC network and corresponding method for provisioning network element resources disclosed by Farry, Safadi, Ludwiczak, and Dev describes the inventions of claims 3 and 15, but fails to disclose a trouble ticket system operable with at least one of the HFC network manager and the fault manager for generating trouble ticket alerts in response to improper status or configuration of at least one of the network elements and the customer-premises equipment.

Daniel discloses a trouble ticket system (104) (col. 3, lines 36-39) operable with expert system (102) which generates trouble ticket alerts in response to the state of various components within a network (col. 3, lines 23-36), this state being configurations of network components (col. 5, lines 6-8) or status of individual network components in order to generate a fault report alerting the network manager [expert system] to problems with the network (col. 2, lines 18-39).

It would have been obvious at the time to a person of ordinary skill in the art to modify the HFC network and corresponding method for provisioning network element resources disclosed by Farry, Safadi, Ludwiczak, and Dev to include a trouble ticket system operable with at least one of the HFC network manager and the fault manager for generating trouble ticket alerts in response to

improper status or configuration of at least one of the network elements and the customer-premises equipment as taught by Daniel. The reason for doing so is to alert the HFC network manager or the fault manager to problems with the network.

Regarding claims 5 and 7, the modified HFC network and corresponding method for provisioning network element resources disclosed by Farry, Safadi, Ludwiczak, Dev, and Daniel disclose the inventions of claims 4 and 6, and is characterized in that the HFC network manager updates the improper status of at least one of the network elements and the customer-premises equipment to a proper status after the trouble ticket has been addressed.

The HFC network manager introduced by Ludwiczak automatically updates the status and configuration data stored in the database whenever a change takes place (Ludwiczak, col. 3, lines 55-60).

7. Claims 8 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Farry and Safadi as applied to claim 1 above, and further in view of Opoczynski (5,519,830) and Gorman et al. (6,137,793) [Gorman].

Regarding claims 8 and 9, the modified HFC network and corresponding method for provisioning network element resources disclosed by Farry and Safadi disclose the invention of claim 1. Farry additionally discloses video equipment for communicating video signals (col. 4, lines 18-20) and for the

network elements include a fiber optic node (Farry: Figure 8, ONU, col. 7 line 65 – col. 8 line 3) connected to the distribution node by a fiber optics network and to subscribers through coaxial cable.

Farry and Safadi fail to disclose the network elements include a host digital terminal for communicating the telephony signals and a cable modem termination system (CMTS) for communicating the data signals.

Opoczynski discloses a host digital terminal (300) for communicating telephony signals over a network (col. 3, lines 44-57).

Gorman discloses a CMTS (col. 8, lines 39-46) for communicating data over a network.

It would have been obvious at the time to modify the HFC network and corresponding method for provisioning network element resources disclosed by Farry and Safadi to include among the network elements a host digital terminal for communicating the telephony signals as taught by Opoczynski in order to provide a means for distributing telephony signals over the HFC network.

It would have been obvious at the time to further modify the HFC network and corresponding method for provisioning network element resources disclosed by Farry, Safadi, and Opoczynski to include among the network elements a CMTS for communicating the data signals as taught by Gorman in order to provide a means for communicating data signals over the HFC network.

Application/Control Number: 09/851,235

Art Unit: 2611

8. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Farry and Safadi as applied to claim 1 above, and further in view of Dev.

Regarding claim 11, the modified HFC network and corresponding method for provisioning network element resources disclosed by Farry and Safadi describes the invention of claim 1, including the database to store logical connections between the HFC network and the customer-premises equipment of subscribers, but fails to disclose the database is a service, design, and inventory (SDI) database and stores data indicative of physical connections between the HFC network and the customer-premises equipment of subscribers.

Dev discloses a virtual network which serves as a database which contains all relevant information concerning the managing and monitoring of a network (col. 5, lines 40-44), including the servicing of the network (col. 5, lines 21-25), the design of the network [the physical connections between all devices] (col. 5, lines 29-34), and the inventory of the network (col. 5, lines 35-39), centralizing all such information into one relevant database.

It would have been obvious at the time to a person of ordinary skill in the art to modify the HFC network and corresponding method for provisioning network element resources disclosed by Farry and Safadi to make the database an SDI database which and stores data indicative of physical connections between the HFC network and the customer-premises equipment of subscribers as taught by Dev, for the advantage of centralizing all such information into one relevant database.

### ***Conclusion***

9. The following are suggested formats for either a Certificate of Mailing or Certificate of Transmission under 37 CFR 1.8(a). The certification may be included with all correspondence concerning this application or proceeding to establish a date of mailing or transmission under 37 CFR 1.8(a). Proper use of this procedure will result in such communication being considered as timely if the established date is within the required period for reply. The Certificate should be signed by the individual actually depositing or transmitting the correspondence or by an individual who, upon information and belief, expects the correspondence to be mailed or transmitted in the normal course of business by another no later than the date indicated.

### **Certificate of Mailing**

I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to:

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

on \_\_\_\_\_.  
(Date)

Typed or printed name of person signing this certificate:

\_\_\_\_\_  
Signature: \_\_\_\_\_

### **Certificate of Transmission**

I hereby certify that this correspondence is being facsimile transmitted to the United States Patent and Trademark Office, Fax No. (703) \_\_\_\_ - \_\_\_\_ on \_\_\_\_\_.  
(Date)

Typed or printed name of person signing this certificate:

\_\_\_\_\_  
Signature: \_\_\_\_\_

Please refer to 37 CFR 1.6(d) and 1.8(a)(2) for filing limitations concerning facsimile transmissions and mailing, respectively.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dominic D Saltarelli whose telephone number is (703) 305-8660. The examiner can normally be reached on M-F 10-7.

If attempts to reach the examiner by telephone are unsuccessful, the primary examiner, Christopher Grant can be reached on (703) 305-4755. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-4700.

Dominic Saltarelli  
Patent Examiner  
Art Unit 2611

DS

*Chris Grant*  
CHRIS GRANT  
PRIMARY EXAMINER